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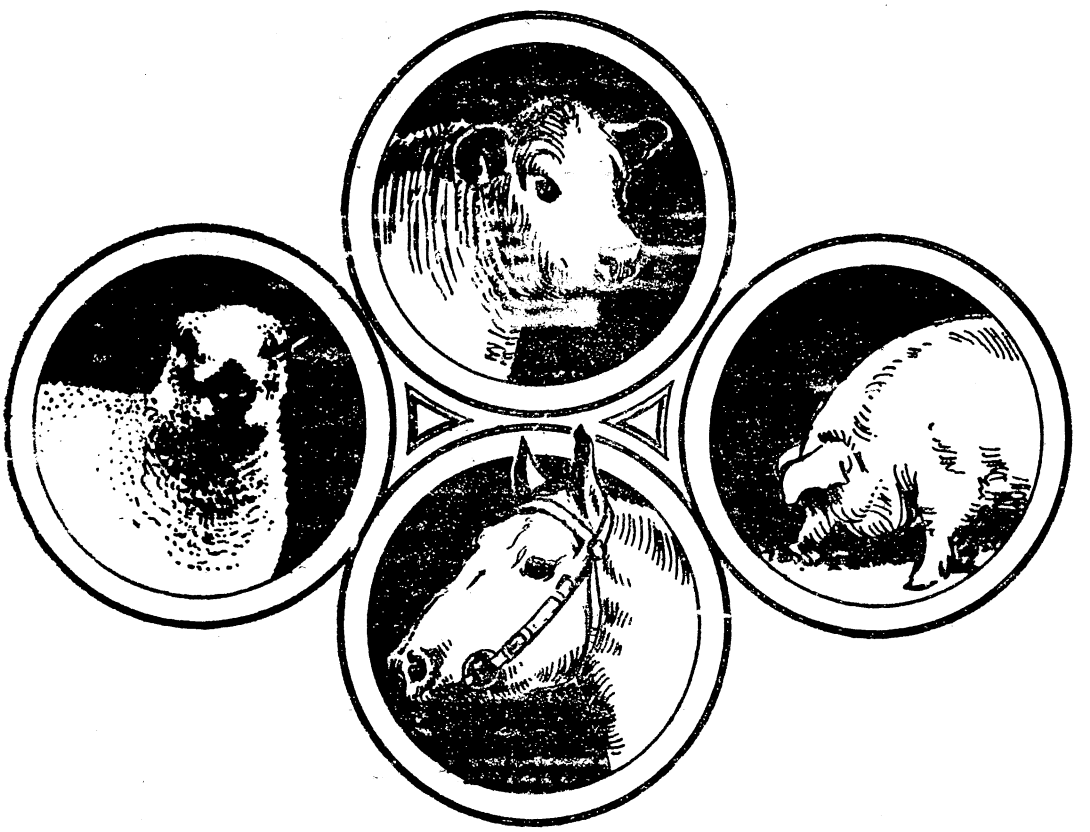
The EXTENSION ANIMAL HUSBANDMAN



UNITED STATES DEPARTMENT
OF AGRICULTURE
WASHINGTON,
D.C.

Serial No. 23 September, 1931.

Fortunes can be made in depression as well as in periods of prosperity but they are made by a different class of people and by different methods. In periods of prosperity the borrower, the speculator, the trader, and the agitator prosper most. In periods of depression the lender, the investor, the builder, and the producer succeed. The opportunities are for those in this group who substitute thrift for extravagance, industry for indifference, efficiency for inefficiency, honesty for dishonesty, and service for selfishness.

-- Roger W. Babson

UNITED STATES DEPARTMENT OF AGRICULTURE

Washington, D. C.

THE EXTENSION ANIMAL HUSBANDMAN

Issued quarterly by the Bureau of Animal Industry and the Office of Cooperative Extension Work, Cooperating.
C. D. Lowe, Senior Extension Animal Husbandman.

Serial Number 23 -- -- September, 1931

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NATIONAL RECORD OF LIVESTOCK PERFORMANCE -- YOUR OPINION WANTED

By E. W. Sheets,
Chief, Animal Husbandry Division,
United States Department of Agriculture

- - -

Are we ready for the establishment in the United States of a NATIONAL RECORD OF LIVESTOCK PERFORMANCE?

Record of performance embodies the practical application of all animal husbandry in a broad sense. It is the acid test of our research and teaching endeavor. It is the basis by which we all should be guided in our attempts to serve the animal industry. Record of performance and register of merit are not new things in the dairy industry. It has often been stated that the advantage of definite measurements enjoyed by that industry is an important one. The dairy folks weigh and test the milk and calculate the butterfat. Let us consider what we could do.

In the case of meat animals we can weigh and grade the finished animal at a prescribed age where the animal is fattened for slaughter; calculate the dressing percentage; grade the carcass and meat by our best-known standards; grade and weigh the fleece of sheep; score breeding animals by our best breed and utility standards; and, in the case of poultry, record the numbers of eggs laid, their size, and quality. For draft animals, in addition to scorings, a dynamometer test may be made.

We all know that research is now under way, particularly with swine, to determine what standards of performance we may reasonably expect. Furthermore, we are constantly striving to perfect, by research, our methods of recognizing and definitely measuring excellence in our livestock. Both these types of research will in all probability be continuous for many years, adding new knowledge, refining our methods.

The question which I want to raise is, Are we ready to do as much or more for all livestock as is being done for dairy cattle? I am of the opinion that nothing essential will be gained by delay, and such a move has much possibility of benefit. The dairy folks do not attempt to measure, for purposes of their performance records, such factors of quality as softness of curd,

size of fat globules, and vitamin content. They merely determine the number of pounds of milk and butterfat. Should we, then, for meat animals, delay until we have perfected methods for controlling and measuring such factors as marbling, tenderness, and palatability? Or should we begin to use now our best available methods, improving them as experience justifies.

Such an undertaking would be big enough to enlist the support of all agencies having to do with livestock welfare. The Federal Government, the States, the breed and other livestock associations, the packers, the livestock press, and breeders, all would have a proper part to play.

The primary purpose of the effort, as I see it, would be to record permanently the performance of outstanding sires and dams as measured by our best knowledge of utility values. It would seem that the record should be based chiefly on the provedvalue of the animal's offspring, although the individual itself should be purebred and registered.

Some of the essentials of such a record would seem to be:

1. A permenent record in published form should be kept.

2. Any breeder, however small, should be entitled to nominate an outstanding individual.

3. The standards set should not be so high as to discourage hope of attainment, yet high enough to render achievement a distinction.

4. Appropriate public recognition should be given to qualifying animals.

5. Requirements throughout the country should be uniform.

Now for your reactions to the idea. It will be appreciated if you will use the questionnaire on the other side of this page in listing your replies to the various questions, and in addition write further comments if you have them.

Please take a few moments and give us your frank opinion.

Fill in, tear out, and mail to Chief, Bureau of Animal Industry, attention, Animal Husbandry Division, U. S. Department of Agriculture, Washington, D. C.

Questionnaire regarding
A NATIONAL RECORD OF LIVESTOCK PERFORMANCE

1. Do you think there is any advantage in postponing such a movement beyond the time necessary for perfecting plans? _____

2. What system do you suggest for carrying out such a project?

3. Is one standard of excellence sufficient for each species of animals or should there be two or more (such as Silver Medal Sires and Dams and Gold Medal Sires and Dams) in order to distinguish between excellent individuals and extraordinary ones? _____

4. With dual-purpose breeds of a species, should the same standard of excellence be used to measure each of the products as is used for the special-purpose breeds? _____

5. Should quantity and quality of product in the offspring be sufficient measurement of excellence of performance, or should factors such as ability to use feed efficiently, economy of gains, and prolificacy also be included?_____

6. Should the health of the animal be made a matter of consideration? _____

7. Should this performance record be restricted to registered purebred animals, or should crossbreds and grades be eligible?

8. How should such an undertaking be financed? _____

9. In order to keep the project simple, and to make it a measure of livestock rather than of stockmen, should we not eliminate from consideration all such variable factors as methods of feeding and management, distinctions according to age, purpose, and type, and measure these animals strictly on the basis of quantity and quality of product?
Answer: Yes_____ No _____

(Signature)_____

WHAT'S NEW IN THE STATES

Arkansas

The steers and grass in the grazing plots at the University of Arkansas Cotton Branch Experiment Station, Marianna, Ark., were a source of considerable interest to cotton growers who attended a field day there August 27. Most of them had seen the plots and the steers in May, and the quantity of beef which had been produced per acre since the steers were turned on grass April 6 was enough, even at present prices, to give a cash return far above the average returns which will be received from an acre of cotton.

In addition to the information furnished on returns in beef per acre, there was a comparison of a fertilized plot with an unfertilized plot. The plots contained 3.3 acres each and were grazed by two-year-old medium-grade steers. The condition of the grass determined the number of steers grazed from time to time. The following table gives results to date.

Item	Unfertilized Plot	Fertilized Plot
Total pasture days	628	824
Total pounds gain	887	1474
Average gain per day per steer	1.41	1.79

If it is granted that the gains were worth five cents per pound, the steers had paid to date a rent of $13.43 per acre on the unfertilized plot and $10.33 on the fertilized plot after the cost of fertilizer, which was $12.00 per acre, is subtracted. These relative returns do not tell the whole story, as the grass on the fertilized plots on August 27 was much better.

-- M. W. Muldrow.

Georgia

W. Gladstone Owens, swine specialist, resigned July 1 and is now doing county agent work at Dahlonega, Ga.

Addison W. Simpson, jr., attended the recent meat-cutting short course held at the Massachusetts Agricultural College. K. F. Warner assisted in conducting the work, which was sponsored by the National Live Stock and Meat Board.

Indiana

Three hundred and thirty lambs were shown by 48 4-H Club members from 15 Indiana counties in the second annual lamb show held at the Indianapolis Union Stock Yards under the auspices of the club department of Purdue University. The show was the biggest 4-H event of its kind in the country, according to F. M. Shanklin, assistant State club leader.

Kansas

The third year of the Five-Year Program of Beef Production in Kansas is now under way and includes beef-cattle schools, demonstrations on beef-herd management, a beef-production contest, and the operation of the Santa Fe Beef Cattle Festival Train.

The train, which is to tour Kansas on the Santa Fe lines from August 24 to September 5, is featuring the creep-feeding of beef calves. It will make 34 stops and reach practically all the major beef-producing areas.

There will be a speaking program, beef-cattle exhibits, and booth exhibits. The speaking program includes a headline speaker, brief talks by extension specialists on subjects related to beef production, a discussion on creep-feeding calves by the 1930 Kansas Beef Production contest winner, a judging demonstration by a 4-H Club boy, a talk by the extension nutrition specialist on selecting and preparing beef and its place in the diet, and selection of the county "Queen of the Prairie," who will compete for State honors at the final stop.

Livestock exhibits include a representative bull and cow from the Hereford, Shorthorn, and Angus breeds. These are selected from Kansas herds and in most cases have been winners at the American Royal.

Another car will carry one lot of five creep-fed calves and a lot of five noncreep-fed calves, with a comparison of weights, feed costs, and values.

Booth exhibits will include working models and displays on the various subjects connected with beef production such as

correct types, wintering cows, the time of year of calving, creep-feeding calves, fattening cattle, the control of diseases and insects, market trends of creep-fed calves, pasture management, feed-lot equipment; boys' and girls' club work, and a refrigerated display of different cuts of beef, showing the various grades.

W. H. Atzenweiler, formerly county agent of Brown County, has been appointed extension economist in livestock marketing and is now working with the beef, swine, and sheep programs that are being conducted. -- J. J. Moxley.

Maryland

Six purebred ram sales are being held in Maryland this summer. Five of these have already been held and the sixth is scheduled for Saturday, September 12. In the five sales held thus far 102 rams have sold for $1,620, or an average of approximately $15.90 per head. This seems extremely low, but our purebred breeders had the rams to sell, and it seemed as if the only feasible thing to do was to sell them. Practically all our lamb crop has been marketed for some weeks. Prices ranged from $5 to $10 per head and were generally satisfactory, all angles considered. There has been much more treating for stomach worms and other internal parasites this year than usual, because of the warm, moist weather. There is little tendency on the part of our flock owners to reduce their flocks or close out altogether. Sheep are paying our farmers about as well as anything they have on the farm.

The Maryland Litter Contest has the largest number of entries it has ever had. Our requirements are 1,500 pounds in 150 days. Several of the litters have already been weighed, and some phenomenal weights have been obtained. The results of this contest will be announced during the annual stockmen's banquet to be held in Baltimore the first week in January.

More interest than usual is being manifested in horses. Several stallion owners tell me they have bred more mares this year than for several years past. It looks as if horses and hard times may work pretty well together.

Within the last few months several new herds of beef cattle have been established. More of our cattlemen are coming to the point of raising their own steers. Unless something miraculous happens to bolster the dairy situation, further progress along this line may be expected to be quite rapid.

-- K. A. Clark.

Massachusetts

C. J. Fawcett, animal husbandry specialist, attended summer school at Cornell University the past summer.

Oregon

During the last month one of the important pieces of work we have been carrying on in the State has been in cooperation with the Oregon Wool Growers' Association in the "Eat More Lamb" campaign, which is being staged in cooperation with the National Wool Growers' Association. A total of 15 meetings were held in Oregon, mostly in the range country, and practically all these meetings were arranged by the county agents, cooperating with local sheepmen in the various sections. The meetings were successful, and a good share of the Oregon quota was raised during that time. It was indeed very gratifying to see the interest shown by the sheepmen in this plan to help them in their business, and I consider it an outstanding piece of extension work at this time.

Eight of our Oregon counties have been taking an active part in the cooperative shipping of lambs to market. This project has been very successful during the past two years. The county agents are very active in guiding this movement, and the results have been gratifying under the prevailing feed conditions that exist throughout the State. The cooperative marketing of lambs from these counties is having a very beneficial effect upon the entire industry, in that it has a stabilizing influence on the prices paid by buyers in the field.

During the last few years we have had our troubles in Oregon with roundworm infection among hogs. During the past year we have staged a campaign for swine sanitation in cooperation with the Bureau of Animal Industry and a marked improvement in conditions is shown. Swine growers readily see the need for an improvement in their sanitary condition and are quick to avail themselves of the opportunity offered in this project.

In connection with our swine production program in the State we find an increased interest this year because of the low price of wheat. The present indications are that we shall have a marked increase in swine production during the next year or so.

The feed conditions have been affected considerably by drought throughout the Oregon section with an accompanying hay shortage in a large part of the territory. With this condition facing our stockmen for the coming winter, we are receiving requests concerning the use of straw, cottonseed cake, and screenings from the elevators in the wheat territory as possibilities for wintering through the season.

The Extension Service has cooperated with the Bureau of Biological Survey in poisoning a large area of range land to destroy squirrels. This work has been going on for a number of years, and each year a little larger territory is covered. The stockmen themselves have helped in the distribution of the poison, which is done in a systematic and effective manner, under the direction of the Bureau of Biological Survey. This project has proved to be very beneficial in increasing the amount of feed on this area. -- H. A. Lindgren.

South Dakota

I. B. Johnson became State leader of the animal husbandry project on August 1.

Tennessee

J. H. McLeod, swine specialist, spent a week with K. F. Warner at the meat laboratories of the United States Animal Husbandry Experiment Farm, Beltsville, Md., in further training for conducting meat demonstrations in his own State.

RESOLUTION

Among the resolutions adopted by the recent conference of animal husbandry workers and others interested in range livestock problems, at Miles City, Mont., was the following:

"That the State experiment stations and colleges in the range States and the United States Department of Agriculture, give immediate attention to the home preservation of meats as an emergency measure and that as soon as possible they formulate regular research projects to deal with this problem."

COOPERATIVE OWNERSHIP OF STALLIONS

By W. E. Morris, Extension Animal Husbandman,
Minnesota Extension Service.

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A plan for the cooperative ownership of stallions was worked out because of an interest in this type of organization in the State. The interest did not develop from a desire merely for another organization, but from the position in which we find ourselves in relation to stallions available for service in the State. The services of good, sound stallions of desirable type are difficult to secure in most communities. In the past 10 years, the total number of stallions in the State standing for service has been reduced by half. This reduction of course is due to lack of demand on the part of farmers for their service, with the result that ownership of stallions has been found unprofitable by many. Unless conditions change materially in the horse industry, this situation probably will continue and, if services of good stallions are to be secured and made available for a community, some other means of ownership must be adopted.

This situation has resulted in the formation, by private horse companies, of numerous colt clubs, thus providing the basis for cooperative ownership of stallions purchased. The stallions are to be paid for on the service-fee basis, over a period of about three years. This made it possible for the breeder of mares to get the services of a good horse at about the usual price for service fee, and in most cases assured them a highclass horse. Objection has been raised to this plan in some localities, in that the purchasers believed that through this plan of sale and financing they were obliged to pay an excessive price for the horse purchased. Because of these considerations, there was brought out for those who wished to take advantage of it, a plan which we believe supplies the desirable features of the other plan with the following advantages: (1) Through this cooperative plan a high-class horse can be secured for service in a community at a lower cost or lower service fee than by any other plan; (2) by the payment of cash for the horse a considerable saving can be made ...

in the purchase price, and (3) it offers an opportunity to obtain the services of a better horse than would be available otherwise.

The nature of the business, as stated in the articles of incorporation, is the improvement of horses owned and produced in the county. This implies better breeding, feeding, and management of horses, and the joint purchase and use of high-class stallions. The gist of the plan is the formation of an association by blocks, which means a subdivision of the association for the convenient grouping of the members, and the possible election from that group of a director in the association. As to financing, it provides first for an assessment made on the basis of mares subscribed in the association for the purchase of the stallion. For example, if it is desired to purchase a horse at about $1,000, 50 mares will need to be subscribed at $20 per mare to raise the purchase price. This initial charge of $20 will also cover the service fee for the first year. In addition to the 50 mares subscribed, with a mature horse, additional mares may be bred for nonmembers. For these additional mares a service fee will be charged, an amount customary for a horse of the quality in use. The service-fee money will go into the treasury to be used for the operation of the association. It is estimated that it will take about $300 per year to keep and stand a stallion. This amount will need to be raised each year, and will be raised, first, from service fees charged nonmembers. After that, assessments will be made on each mare subscribed in the association, to the amount needed to raise the necessary funds, with funds already in the treasury, for the operating expense for the year.

The plan will work in communities where people are accustomed to working together and cooperating in other lines of activity. If they are not accustomed to doing this, jealousies will arise and trouble may come from the belief that some are getting more out of the organization than others. The plan offers an opportunity for a great many communities to secure the services of higher-class horses than are available now, and will supply this service at a much reduced cost to the members.

AMERICAN SOCIETY OF ANIMAL PRODUCTION

The annual meeting of the above organization will be held at Chicago, Ill., November 27 and 28. It is the event of the year for animal husbandmen. Officers Wayland Rhoads, Rex Beresford, and L. A. Kauffman of the extension section are arranging an especially attractive program for extension workers. The dates immediately precede those of the International Live Stock Exposition.

GIVING PORK-CURING DEMONSTRATIONS

By J. H. McLeod, Swine Extension Specialist,
University of Tennessee.

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Pork has long been the principal meat used by southern farm people. In Tennessee (according to records of a survey) 715 pounds of pork are consumed yearly by the average rural family. This represents 86 per cent of the total amount of meat eaten. Poultry, beef, mutton, fish, wild game, and veal, named in order of amount consumed, make up the remaining 14 per cent for a total of 831 pounds.

While cured pork occupies a very important place in the diet of southern farm folk, yet it is not always handled in the best manner. The lack of proper cooling, and trimming, and particularly the use of too much salt, represent the chief faults. In order to teach better methods in pork curing our extension service in 1927 started some demonstrations along this line. In view of the fact that most of the hog killing on the farm is done in November we have confined most of our demonstrations to this month.

The first year we gave six demonstrations and had an attendance of 241 people. Since that time, the demand for the work has grown each year and in November, 1930, we gave 33 demonstrations with a total attendance of 2,703. The preparation of the home meat supply being of joint interest to both men and women, we have, from the beginning, worked in cooperation with the extension food specialist who has taken part in the demonstrations in showing methods of making sausage, canning meats, etc.

Early announcements of the demonstrations are helpful. We give first notice of the project at our annual agent's meeting. At that time a canvass is taken to determine what agents wish the demonstrations. During late summer or first part of the fall the district supervisors fix definite dates with the county agents desiring the work, and publicity in the counties is begun.

The following instructions are then sent to each of the county agents who are planning for demonstrations:

What the County Agent Will be Expected to Do.

1. Arrange with some farmer to furnish a dressed hog; have the hog killed and dressed at least 16 hours before the demonstration. This is necessary to give ample time for the chilling of the carcass. A temperature ranging from 34 to 40° F. is most satisfactory. If the temperature of the weather is not as low as that, permission should be secured from the owner of some meat market or ice house to hang the hog in the cooler for at least 16 hours preceding the meeting.

2. Some of the agents have obtained half of a dressed hog from a meat market. This portion of a hog is satisfactory for the demonstration and the cuts made can be returned after the meeting and sold in the regular trade.

3. Select a meeting place. Most of the demonstrations in the past have been given at the county seat in the court house. Any place, however, where a rural audience can be gotten together will be satisfactory. The demonstration will last from 1 1/2 to 2 hours so that the room should be made warm and chairs or benches provided.

4. Provide three tables, approximately 30 by 60 inches or larger. They should be covered with clean wrapping paper.

5. Cooperate with the home demonstration agent in advertising the meeting through the newspapers, circular letters, phone calls, and personal invitations.

What the County Home Demonstration Agent Will be Expected to Do

1. Work with the county agent in arranging the place of meeting and see that the room is put in order.

2. Cooperate with county farm agent in giving publicity to the meeting. Ways suggested--the local newspapers, circular letter, phone call, and personal invitation.

3. Have some bank, business or civic organization or individuals furnish the cash to pay for the meat to make sausage used in the demonstration and from 2 to 5 loaves of bread to be used in serving the cooked sausage. From 3 to 5 pounds of sausage will be sufficient for most demonstrations.

4. Provide a small gas stove, a kettle for hot water, a bucket of water, two shallow kitchen pans medium size, two large forks to be used in cooking the sausage, a wash cloth, and drying cloth.

What the Specialist Will be Expected to Do

1. Furnish at least two articles for publicity concerning meat cutting, curing, and sausage-making demonstrations. These articles will be sent direct to the county agent and the home demonstration agent. The agents may feel privileged to use them in full or only in part.

2. Furnish knives, saw, sausage mill, measuring cup, measuring spoons, scales, pepper, salt, etc.; in fact, all tools and ingredients necessary for cutting and curing the meat and seasoning the sausage.

3. Furnish mimeograph sheets on cutting and curing meat, making sausage, etc., to be used at time of the meeting.

Conducting the Demonstrations

The temperature of the fall and winter weather in Tennessee is not very stable. One day it may be 20° F. and two days later up to 60°. For this reason we have found it more satisfactory to hold the demonstrations in towns where refrigeration can be secured. The meat-market men are usually interested in such work and, when the weather is warm, will permit the carcasses brought in by the farmers for demonstration to hang in their box for cooling. Often the market men will offer to furnish a carcass for demonstration.

Most all the meetings have been held in the court houses; however, at times we have used vacant stores, garages, school houses, and occasionally when the weather man promised continued cold weather, we have held a demonstration on the farm.

The man and woman specialists giving the demonstration should plan their work so that the different steps in the demonstration will come in logical order. Each person should assist the other at certain points, when, by so doing, it will help in saving time. The demonstration is started by the man specialist cutting up the hog and showing the different cuts and the method of trimming. Usually the first cuts made are the picnic ham and Boston butt. If the latter piece is given to the food specialist she can have it sliced, weighed, cut, and ready for sausage making

when it comes time to give her part of the demonstration. After two people have demonstrated together for two or three times, all these little items of cooperation that are helpful in expediting the demonstration are worked out and they will find that they are completing the demonstration 20 or 30 minutes earlier than when they first began.

After the different cuts have been made and shown, the cure is applied to at least a portion of the hog and the method of packing down given. It is then explained that it will be necessary to break the pack twice in the process of the cure and the curing mixture applied each time. The giving of the extra applications is a rather radical departure from what most of the farmers in the South are practicing, and a little time given to explaining the reason why will be helpful in clearing up the question in the minds of the audience. After the time for leaving the meat in cure has been given and the method of smoking, preventing skippers, sacking, etc., is explained, the meeting is turned over to the food specialist who shows the latest methods in cooking pork, canning, sausage making, etc.

The curing ingredients recommended are the same as used at our experiment station and practically the same as recommended by all the agricultural institutions. Namely, for each 100 pounds of meat we use:

7 1/2 pounds salt
2 1/2 pounds sugar
2 ounces saltpeter

Each piece of ham or shoulder is kept in cure 1 1/2 days for each pound weight.

For the bacon cure we first used the box method which consisted in applying the following to each 100 pounds of bacon:

3 pounds salt
1 3/4 pounds sugar
5 ounces saltpeter

The meat is then packed down in a galvanized box. It is necessary that the box have practically the same dimensions as the bacon strips so that the strips will fit in tight. A lid is then placed on the meat and weighted down with heavy weights.

In a short time the juices from the fresh meat cover the bacon and it cures in its own juices within a period of 20 to 25 days. This method proved very satisfactory with the farmers who tried it but on account of the trouble of getting the box it was not extensively used.

In the last two years we have tried a dry sugar cure recommended by our experiment station which, on account of not requiring any extra equipment, has been more generally used by the farmers. The mixture for each 100 pounds of bacon consists of the following:

4 pounds salt
2 1/2 pounds sugar
5 ounces saltpeter

This mixture is applied in the same manner as recommended for the hams and shoulders but the bacon is left in cure for only 12 to 18 days, according to size of the strips.

The number of demonstrations held during the past four years with the attendance is given below:

Year	Demonstrations	Attendance	Average Attendance
1927	6	241	40
1928	6	310	51
1929	29	2118	73
1930	33	2703	79
Total	74	5372	72

Each year there has been an increased interest in the work on the part of the county agents, the home agents, and the farmers. This fall in order to spread the practice of the better curing of meat we are planning, with the cooperation of the Bureau of Animal Industry, to hold three training schools for the benefit of the men and women agents. Through the cooperation of the experiment station, each agent will be furnished a hog to kill, dress, cut up, and pack down in the cure.

The women agents will have the opportunity to observe the cutting of the carcasses and the different steps taken in the curing process, as well as to get special instructions on making sausage, canning, and preparing pork dishes. The agents then will plan to give demonstrations in the different communities of their counties.

MICHIGAN PIG CROP CONTEST

The pig-crop contest has been conducted the past three years and has proved to be the most successful method in this State for promoting swine work. This project primarily concerns the man who is producing commercial pork on quite an extensive scale. Results obtained are used to advantage at meetings and through the press.

Thirty-three contestants from 8 counties enrolled and turned in farrowing records in this work in 1930. The size of their herds varied from 4 to 25 sows. Twenty contestants finished the contest and turned in final weights as compared with 12 in 1929. Three contestants produced over a ton of pork for each sow on their farms. This is the first time this has been achieved in Michigan since the inauguration of this contest.

The average number of litters per contestant for the 20 finishing was 8. The average size of litter saved and marketed was 7 1/2 pigs and the average pig weight in 180 days was 183 pounds.

Eleven contestants qualified for certificates of award as compared with 4 in 1928 and 9 in 1929. Sixty per cent of the men entering turned in final weights. That a market pig can be produced in 180 days or less is indicated by the fact that 10 contestants marketed their entire lot of pigs when they were from 167 to 175 days old. Five contestants' pig crops were marketed from 2 to 6 days late while 5 were marketed from 17 to 54 days late. The contestants whose pigs were oldest at time of marketing ranked lowest in the contest and most of these sold on poorest market.

These contestants' herds served as demonstration herds. Good litters were saved, the McLean County system of sanitation was followed in detail or in part, a pasture crop was used, farm grains supplemented with protein were fed in self-feeders, and time of marketing was taken into consideration by most contestants finishing.

Cash awards furnished by the packing houses of Detroit acted as a stimulus to promote this contest.

A champion swine grower was selected from the men finishing highest in the contest. In making this selection, methods of management, feeding practices, uniformity of pigs, time of marketing, as well as litter weight, were carefully weighed.

--From Michigan Annual Report, 1930.

BEEF CATTLE EXTENSION WORK IN GEORGIA

By
W. F. Ward, Georgia Animal Husbandry Specialist

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Georgia has been primarily a cotton-producing State and interest in livestock has fluctuated in an inverse ratio to the price of cotton. During the last few years more attention has been given to stock and to feed crops. Unfortunately, after two or three years of low-priced cotton many farmers who would like to put in livestock do not have the necessary capital. In Georgia there is not so large a percentage of stock farmers nor so large a proportion of farms where livestock are maintained as part of the regular farming operations as in many other States. For these reasons some of the livestock work here is of an elementary nature.

Indications are that there will be an increased interest in livestock for several years to come. The increasing acreage of idle farm land demands that more stock be kept for the proper utilization of such lands.

In Georgia the livestock extension work is carried on through the county agents. There are 161 counties in Georgia and 137 county agents. No regular livestock extension work is conducted in counties not having an agent.

A number of the county agents are proficient livestock men and in such counties demonstrations are conducted with little help from the extension livestock men. The work is conducted chiefly in those counties where the agents request help. More time is necessarily given to agents who do not have livestock training and in whose counties there is considerable interest in livestock. Such an agent is given assistance and instruction in such manner that he can later conduct the work himself. No attempt is made to carry on the work for him. The farmers are encouraged to look directly to the county agent for help. In some cases livestock work is being done by the vocational teachers of agriculture, and where they desire help in livestock projects the extension livestock men or specialists assist them also.

One man can not carry on work in all the counties having county agents, and neither are all the agents interested in the development of any one phase of the livestock business, such as the raising or feeding of beef cattle. So certain counties are selected at the beginning of the year where intensive beef-cattle work is to be carried on and other counties where preliminary work is to be done. The remaining counties are considered a miscellaneous group where an occasional visit is made when necessary.

Demonstrations are of major importance in conducting livestock extension work. The demonstrations in the beef-cattle work are chiefly the making of permanent pastures, use of temporary pastures usually including winter growing legumes, fattening cattle for market, wintering cattle, trench silos, castrating and dehorning, and value of purebred sires. Field meetings are held on the farms and the results of the demonstration are viewed and discussed.

Auction sales of beef cattle are encouraged and assistance is rendered in selecting bulls at times when no auctions are held.

Atlanta and Montgomery are the only near-by markets where feeder cattle are purchased. A list of all farmers having feeder cattle for sale in Georgia and another list of farmers wanting to buy feeder cattle are made up in the early fall and these lists are furnished to county agents so that the buyers and sellers can get together.

Field meetings, where the get of purebred sires from scrub cows are shown, have been especially valuable in getting cotton farmers interested in the purchase of purebred beef bulls.

The cattle-fattening demonstrations have emphasized the value of home-grown feeds and demonstrated that better finish can be secured by their use than by feeding cottonseed meal and cottonseed hulls, both of which have to be purchased and which were formerly considered the standard fattening ration. The value of velvet beans for feeding has been clearly shown and more than a million acres of this crop are now grown annually in this State.

Demonstrations have shown that Austrian peas is a good winter and spring grazing crop and that stock soon cultivate a

taste for them, disproving the prevalent idea that no stock would eat them. They are of considerable importance and value for the breeding herd, as well as a soil builder.

County-wide meetings are held throughout the State to interest farmers in more and better livestock, more feed crops, and better pastures. Other meetings are held just prior to the time for taking up a special phase of the work such as a campaign for more purebred sires; and the importance of improved pastures is stressed at meetings in January since pasture lands are usually planted in February and early March.

The extension forces have the cooperation of the bankers of Georgia, who have agreed to make loans only to farmers who make livestock a part of their farm program and carry out the program under the supervision of the county agents.

The Fall Festival in Moultrie has been made an annual event and is really a stock show put on by Swift & Co., the commission firms of Moultrie, and the stock farmers of Colquitt and adjoining counties. Last year about 5,000 animals were grouped at the yards for inspection and show. Ten litters, individual barrow classes by 4-H Club members, feeder and fat classes of cattle and hogs, and breeding cattle were on exhibition. The various market grades and classes of livestock were explained.

A feeding demonstration was made at Moultrie by Swift & Co., in cooperation with the extension forces, in which several rations made up entirely of Georgia-raised feeds were used in fattening 800 head of cattle. More than 1,000 people attended the meeting at the close of the feeding period.

Each year about 1,500 boys come to Camp Wilkins located on the college grounds, for instruction in agricultural subjects and recreation. Each county agent is required to bring 6 or more boys to the camp for one week. Some bring as many as 40. Camp lasts six weeks, a new group arriving each week. The livestock extension men give special instruction to these boys during four days of each week, beef cattle judging being given one day. The boys have optional classes and it is significant that more than 50 per cent of them choose livestock work. Many of the future stock farmers of Georgia will come from these boys.

4-H CLUBS IMPROVE QUALITY OF CATTLE

Outside of all the other good that comes from 4-H beef-calf club work, one of the best things is that it greatly improves the quality of the cattle in a locality. It is the best purebred-sire campaign that could be conducted, though under another name. If a county agent or any other extension worker were to go out on a campaign in Montana for better quality beef sires or more purebred beef bulls it is doubtful how much progress he would make, but when a beef-calf club is begun like the one that County Agent Jones organized in Fergus County last year, a lesson is driven home. This club consisted of 31 members, and each member took a calf raised on his dad's ranch and after feeding it on homegrown grains he exhibited it at the district fair. Here the calves that were long-legged and long-necked stood away down at the end of the line, below the calves that were of proper beef type.

When these same boys went out to find beef calves for their 1931 project they were mighty hard to please and every stockman in the county was hearing about good quality beef calves.

Another way in which the quality of beef cattle is improved through calf-club work is through the many demonstrations that the club boys have held throughout the State this year. At these demonstrations a club boy compares a good quality beef calf with a poor quality calf, pointing out the different things that go to make up a desirable beef animal and also emphasizing that "like begets like" in all lines of breeding, and that the only way to raise good quality beef cattle is to use good beef type purebred bulls.

Contacts With Stockmen

Besides all the other advantages mentioned so far for beef-calf club work, another which must be mentioned is that 4-H clubs furnish a means of getting acquainted with stockmen in outlying communities. We have many good examples of this in the State this year. For instance, County Agent Ward out in the Stearns community in the northwest part of Lewis and Clark County, which is strictly a beef-cattle county, had very little opportunity of getting acquainted with his cattlemen. He started a beef-calf club (feeding club) and after the calves began to eat and put on finish, the ranchers in the community

became interested and now they are proud of the fact that their community is sponsoring a beef-calf club and the county agent work is regarded highly as a result.

Several other instances could be mentioned. One of them is that County Agent Thurber at Fairfield on the Sun River Project made a contact with Mr. Gough, manager of the Teton Land and Cattle Co., which is one of the best sheep and cattle outfits in northwestern Montana. Mr. Thurber made a contact with Mr. Gough by getting him to finance six boys last year in beef-calf club work. He sold the boys their calves and took their notes for them. After the calves were finished and sold, the boys all paid the notes and Mr. Gough again financed the boys for their next year's work.

There were beef-calf clubs in the following counties with the following number of members and calves:

County	Agent	No. Members	No. Calves
Blaine	C. H. Challey	14	14
Cascade Sun River Project Teton	R. E. Cameron) D. P. Thurber) Robert Clarkson)	29	31
Fergus	W. H. Jones	59	58
Flathead	J. C. Paisley	14	21
Lewis and Clark	R. E. Ward	7	7
Roosevelt	A. W. Warden	32	32
Stillwater	C. J. Spalding	15	21
Yellowstone	R. B. McKee	12	17
	Total	182	201

Comments by Agents

* * * * * * * * * As a result of this baby-beef feeding trial there will be 20 calves fed by club members next year and 10 carloads

of cattle will be fattened by farmers this winter. There have never been any cattle fattened in this area before. ***"

--D. P. Thurber

* * * As a result of this baby-beef project it was definitely shown that baby-beef calves can be fattened economically by the use of home-grown feeds. It is largely due to the success of baby-beef club work that this year 17 livestock men in Fergus County are fattening 25 carloads of lambs, 20 cars of steers, and 8 of hogs, using wheat and other home-grown feeds.

--W. H. Jones.

* * * At least two farmers are feeding steers in carload lots at the present time owing to the fact that their children were successful in raising club steers. * * *

--C. J. Spalding.

It is considered that this project as conducted this year is by far the most important single 4-H Club project in this county because of its far-reaching results to stockmen and farmers in this area.

Approximately four carloads of beef calves are starting on feed by 4-H Club members by December 1, 1930. The project has demonstrated the possibilities to adults so well that, according to the closest figures now available, almost 1,000 head of beef calves and steers have been placed on feed on similar rations this winter. With good beef calves selling at from $25. to $30. a head, wheat at 40 to 50 cents per bushel, and alfalfa at $12. a ton, the entire cost of feeding, plus the value of the calf, to get them to a thousand pound average next fall should not be over $75. With the present outlook on wheat prices and other economic conditions, it appears that there is no more profitable livestock-feeding work possible in this area, where those interested have a sufficient amount of feed and water and proper equipment.

--R. E. Cameron.

-- From Montana Annual Report, 1930.

HEE-HAW!

Teacher - "Why does the State of Texas stand at the head of the mule-raising industry in this country?"

Bright Student - "Because the other end is too dangerous, Sir."

NEBRASKA HOG-LOT SANITATION

During October 1930 a survey was made of the 1930 pig crop and the conditions under which it was produced and handled. The survey was conducted in cooperation with the Burlington railroad first, to familiarize the railroad's agricultural department with the hog-lot-sanitation field, and second, as a check on the 1929 Profitable Pork Special. Three counties have been visited and one more will be. One precinct was taken in Saline County near DeWitt. Another was chosen in Burt County near Oakland, while two were taken in Cheyenne County near the north end of the county. A personal call was made at each farm in the precinct. Through interviewing the farmer the information was obtained and recorded after leaving the place. A form questionnaire was used to obtain the desired information.

A total of 240 farmers were visited, of which 74 percent were owners and 26 percent were renters. The Burt County area led in hog production. It had an average of 22.5 sows per farm. Cheyenne County had 8.8 sows per farm and Saline County 6.7 sows. There was very little difference in the number of pigs raised per sow--Cheyenne County, 5.6; Burt, 5.5; and Saline, 5.2.

Burt County had an average farrowing date about 5 days ahead of Saline County and 13 days ahead of Cheyenne. As a result the pigs were heavier at the time of the survey.

Cheyenne County led in equipment. Thirty per cent of the farms were using "A" type houses, 21 percent were using multiple sow houses, and 55 percent had the central house. In comparison with the average, which was 16 percent "A", 16 percent multiple, and 71 percent central, this is quite outstanding. The two-sow houses were the least popular. Twelve out of the 240 farms were using them. Burt County with 81 percent of the farms using central houses, had a hard time trying to practice sanitation. Many of the big producers have invested so much in their equipment that it is hard for them to change it and still harder to practice sanitation with their present equipment.

In following the steps of sanitation, cleaning the houses and placing the hogs on clean ground were practiced most. Bathing the sow and hauling her or her litter to the clean ground were the least popular.

Saline and Burt Counties each reported disease on 78 percent of the farms.

Cheyenne, with newer ground and fewer hog producers, had disease on 50 per cent of the farms. Eighteen per cent of the farms had no hogs on them. Worms were giving the most trouble (47 per cent) with "necro" second (38.7 per cent). Eight per cent reported cholera with only 56.6 per dent of the farmers immunizing.

As would be expected, Burt County had more feeding equipment and 17 per cent more of the farmers were using protein supplements.

Another interesting point is the number of producers feeding minerals. There were several inquiries concerning mineral mixtures. Thirty-nine per cent of the producers were using them. Twenty-six per cent were using remedies, and a surprising fact is that Cheyenne County was using more than either of the other two by 17 per cent.

Out of the 240 farms, only 63, or 26 per cent, were practicing at least one phase of sanitation and 2 per cent were practicing all phases. Quite a number have gone out of the hog business. Sixteen per cent of the farmers in Saline County were not raising hogs largely because disease got the best of them.

Several interesting conclusions may be drawn from the survey so far. The fact that 16 per cent of the farms in Saline County have discontinued raising hogs, largely because of disease, shows the opportunity and need for further work in hog-lot sanitation. Equipment and poor sanitation systems are to blame for 60 per cent of the trouble.

During the early part of January a survey will be made of a territory where hog-lot sanitation has been practiced for a longer period of time, having been started eight years ago. This will show the value of methods used to improve hog-production methods.

The surface has just been scratched and the field is open for an extensive program of sanitation.

--From Nebraska Annual Report, 1930.

The resistances to knowledge are not merely passive, it is not only that most human beings are indisposed to know and learn; they are afraid of and hostile to all that they do not know, and they seek to prevent it in others. The human mind is much more tortuous and indirect than it will consciously admit; it often fails to understand its own motives.--Wells and Huxley in "Science of Life."

BETTER FLORIDA PORK

By Walter J. Sheely, Animal Husbandry Specialist,
Florida Extension Service.

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During the past winter season The Florida Agricultural Extension Service held meetings and meat cutting and curing demonstrations in the central and northwest hog-producing counties of the State, setting forth the necessity for breeding and producing hogs of good quality and the possibilities of a milder cured meat that will carry a more delicious flavor.

Florida people produce their hogs mainly on peanuts. The meat from peanut-fed hogs, when properly cured, carries a fine flavor and is unusually palatable. Some of the southern packers are specializing on peanut pork and hams. One of them cooperated with the extension forces in holding luncheons, serving peanut pork, and having one or two speakers tell of producing good-quality hogs that would meet the packer's and home demand for good meat.

The first one of these meetings was held in Chipley, prominent business men, farmers, and newspaper representatives being invited from the hog counties. Since then a number of other meetings have been held at which peanut pork was served. Further, the State chairman of the agricultural committee of the Kiwanis Club, in his recommendation for club activities, suggested that each club in the State hold a peanut-pork meeting and serve peanut pork. These activities have resulted from the meeting held by the Extension Service in the various counties last winter.

Throughout the hog-producing counties, the cold-storage people have for a number of years been curing meat for the farmer. They have cooperated in all the hog and meat activities and are helping to put over the ideas. With good cold-storage facilities in almost every community and good roads, there is a possibility of building up a meat-curing operation that will insure the farmers' saving their meat whenever they desire to kill, and at the same time will produce a good quality of well-flavored product for home use.

There is an opportunity of improving the quality of meat cured in cold storage for the farmer by using better methods resulting in a less "salty" product.

At Monticello, in cooperation with the county agent and the cold storage plant, in January, 1931, meat was put in a mild cure--the hams and shoulders in dry salt, the bacon, loins and ribs in pickle--with the idea of testing out in this climate a method of curing with less salt.

This meat cured and kept well with a good appearance. To give the hams the final "acid test," on August 7, while on a tour of Jefferson County farms, a hundred farmers, their wives, friends, district agents, and specialists were served these hams at a "picnic" dinner. After dinner a canvass was made of those attending to get their reaction on the appearance, quality, tenderness, and flavor of the hams and all agreed: "It's the best ham we ever ate." Since this August meeting, the county agent of Jefferson County has had many requests for hams "like we had at the picnic."

This season the milder cure will be further tried in other counties in cooperation with the cold storage people with the hope of getting better meat for Florida homes.

FILM-STRIP PRICES UNCHANGED

The same low prices for United States Department of Agriculture film strips will prevail during the fiscal year 1931-32 as have been in effect during the past three years.

The prices for film strips until June 30, 1932, will range from 35 to 71 cents each, depending upon the number of illustrations in the series. The majority of the 120 series that the department has available will sell for 35 and 44 cents each. Film strips are available on such subjects as farm crops, dairying, farm animals, farm forestry, plant and animal diseases and pests, farm economics, farm engineering, home economics, and adult and junior extension work. Lecture notes are provided with each film strip purchased.

A list of available film strips and instructions on how to purchase them may be obtained by writing to the Office of Cooperative Extension Work, United States Department of Agriculture, Washington, D. C.

RECENT PUBLICATIONS

"Horses for the Farm" by James G. Fuller - Wisconsin Extension Service Circular No. 244.

"Deferred Breeding of Beef Cows" by Withycombe, Potter, and Edwards - Oregon Experiment Station Bulletin No. 271.

"Types of Ranches, Practices, Costs, etc., in the Range Beef Cattle Industry" by Saunderson and Richards - Montana Experiment Station Bulletin No. 244.

"Economic Factors Affecting the Beef Cattle Industry of Virginia" by Burmeister, Conway, and Brodell - U.S. Department of Agriculture Technical Bulletin No. 237.

"Cashing In on Beef - A Manual of Modern Cutting Methods" - National Live Stock and Meat Board, Chicago.

"Relation of Size of Grade Fine Wool Ewes to Their Production" by W.E. Joseph - Montana Experiment Station Bulletin No. 242.

"Lamb Feeding Investigations" by Johnson, Rinehart, and Hickman - Idaho Experiment Station Bulletin No. 176.

"Sheep Equipment" - Montana Extension Service Circular No. 12.

"Sixty Farmers Fatten Range Lambs" by A.J. Dexter - Agricultural Development Department, Northern Pacific Railway.

"Boning Lamb Cuts" by K.F. Warner - U.S. Department of Agricultural Leaflet No. 74.

"The Influence of the Growth and Fattening Processes on the Quantity and Quality of Meat Yielded by Swine" by E.L. Scott - Purdue (Indiana) Experiment Station Bulletin No. 340.

"Results of Hog Feeding Demonstrations Covering Five Years" by W.W. Shay - North Carolina Extension Service Folder No. 30.

"Feeding Hulled Oats to Hogs" by E.F. Ferrin - Minnesota Extension Service Pamphlet No. 21.

"Hog Price Facts" - Purdue (Indiana) Extension Service Leaflet No. 154.

"Swine Production - A Manual for Pig Club Members" by Weaver and Thompson - South Dakota Extension Service Special Circular No. 12.

"Breeding Experiments with Sheep and Swine" by B.L. Warwick - Ohio Experiment Station Bulletin No. 480.

"Data Based on a Study of the Operations of Cattle and Lamb Feeders in the Lovell, Powell and Basin Districts During the Winter of 1930-31" by J.R. Neale - Wyoming Extension Service Circular No. 38.

FARM ANIMALS IN RHYME

THE COW

By way of introduction, friends, let lowing herds of kine briefly relate their history, which dates back to a shrine--a Golden Calf, that was set up near Sinai's lofty height, when benighted people bowed their heads, worshipped it at sight. And down the years, lines of descent, from prehistoric day, are drawn about domestic breeds used for the plow and dray. Their flesh and milk were foods of life; and butter, cream, and cheese, proved indispensable products — Then cows, with pedigrees, were next in order, and fine herds, from European shores, were sent to North America; and here, in countless scores, are found the modern breeds of earth-- the Beef and Dairy Cattle (the term comes from the same root-word as capital and chattel). --Aletha M. Bonner.